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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/25/2006

Mridula Kapur

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The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

LENIHAN, JEFFREY S

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

01/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,750	KAPUR ET AL.	
	Examiner	Art Unit	
	Jeffrey Lenihan	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the amendment filed on 10/24/2008.
2. The objections and rejections not addressed below are deemed withdrawn.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claim Objections

4. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 is a multiple dependent claim which recites a film comprising at least one layer made from the polymer composition of any one of the preceding claims. The examiner notes, however, that claims 1, 3, and 4 do not recite a polymer composition; rather these claims recite a film comprising at least one layer made from a polymer composition; claim 16 does not recite any further limitations regarding these parent claims. The examiner therefore suggests amending claim 16 to depend from any one of the preceding claims 5 to 15.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claim depends from claim 1 and recites that components "(A) and (B) are each an ethylene homopolymer" (emphasis added). Claim 1, however, requires that component (A) comprises at least one homogeneously branched interpolpolymer; it is therefore unclear how component (A) can both comprise an ethylene interpolpolymer, as required by claim 1, and be a single ethylene homopolymer, as recited by claim 4, at the same time. The examiner further notes that applicant has deleted the marker (B) from amended claim 1; thereby rendering the meaning of (B) in claim 4 indefinite.

Claim Rejections - 35 USC § 103

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1, 3, 4, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey et al, US4461873, of record.

3. The amended claims are directed towards a film comprising at least one layer made from a polymer composition which comprises a) 35-65% by weight of an ethylene

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polymer having a density greater than or equal to about 0.94 g/cm^3 and a melt index of from 0.001-1 g/10 min, and b) 35-65% by weight of an ethylene polymer having a density greater than or equal to about 0.94 g/cm^3 and a melt index from 50-700 g/10min. Component (a) of the composition comprises at least one homogeneously branched interpolymer having a molecular weight distribution from 1.5-3.

4. Bailey recites an ethylene polymer film (Column 2, lines 15-19) (claims 1,16) comprising a blend of low molecular weight ethylene polymer and a high molecular weight ethylene polymer (Column 2, lines 33-41). Said low molecular weight polymer is characterized by a density of about $0.945\text{-}0.975 \text{ g/cm}^3$ and a melt index of 45-300 (Column 2, Table I), corresponding to component (b) as described above (claim 1). Said high molecular weight component is characterized by a density of about $0.930\text{-}0.955 \text{ g/cm}^3$ (Column 2, Table I), a polydispersity index of less than 10 (Column 3, Table I) and typically has a weight average molecular weight of 400,000-900,000 (Column 3, Table II) (claim 1), corresponding to component (a) described above (claim 1). The high and low molecular weight components are blended in a ratio of 40:60-70:30 (Column 4, Table III) (claim 1). Both the high and low molecular weight components may be homopolymers (Column 2, Table I) (claim 4). Bailey further recites that the high molecular weight polymer may be a random copolymer of ethylene and a C_{4-10} α -olefin (claim 1). The examiner therefore takes the position that combination in the claimed ratio of two ethylene polymers having the claimed densities would have been obvious to one of ordinary skill in the art at the time of the invention, since the choosing of the overlapping portion of the range taught in the prior art and the range claimed by the

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applicant has been held to be a *prima facie* case of obviousness, see *In re Malagari*, 182 USPQ 549.

5. Bailey does not recite the melt index of the high molecular weight component; however, the examiner takes the position that the high molecular weight component would inherently have a melt index range overlapping with the range recited for component (a). Harlin et al, US5494965, teaches a blend of ethylene polymers in which the second component is required to have an overlapping Mw range of 250,000-700,000 (Column 4, lines 27-38). Examples of these polymers are characterized by melt indices of 0.9, 0.5, and 0.6 g/10 min (Column 9, Table I). One of ordinary skill would therefore recognize that ethylene polymers having a molecular weight from 400,000-900,000 as taught by Bailey would be characterized by a melt index overlapping the values recited for component (a) in the composition of the instant claim (claim 1).

6. Bailey does not disclose the properties of water vapor transmission rate (WVTR) as recited in claim 3. However, as discussed above, Bailey renders obvious a film prepared from a composition comprising a blend of high and low molecular weight ethylene polymers, wherein each ethylene polymer is characterized by properties of density, melt index, and polydispersity corresponding to the recited values for the components in the instant claim 1. Furthermore, as Bailey teaches that the high and low molecular weight components of the blend of US4461873 are combined in a similar ratio to the composition described in the instant claim, the examiner takes the position that one of ordinary skill in the art would reasonably expect that the film rendered

obvious by Bailey would be characterized by the same WVTR properties as the film of the instant claims (claim 3). The burden is therefore shifted to the applicant to provide factual evidence that the film rendered obvious by Bailey would not have the recited property of WVTR.

7. Claims 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriguchi et al, US4536550.

The rejection under 35 U.S.C 103(a) stands as per the reasons outlined in the previous Office Action.

Response to Arguments

8. Applicant's arguments filed 10/24/2008 regarding the rejection of claims 5-16 over Moriguchi et al, US4536550 have been fully considered but they are not persuasive.

9. Applicant argues that the polymer blend disclosed by Moriguchi is not relevant prior art, since the molecular weights of the polymer components of said blend are based on intrinsic viscosity measurement and not on GPC data as required by the instant claims. Applicant further argues that none of the examples disclose compositions in which the molecular weights of the polymer components is outside the preferred ranges, and that there is therefore no suggestion to pick polymers having molecular weights outside the scope of the preferred ranges in Moriguchi.

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10. As noted in the prior Office Action, Moriguchi discloses a polyethylene composition comprising 1) polyethylene (A), which has a molecular weight from 5,000 to 90,000; thereby rendering obvious a component having a molecular weight within the range of 5,000-10,000; 2) polyethylene (B), which has a molecular weight from 50,000 to 500,000; and 3) polyethylene (C), which has a molecular weight within the range from 100,000 to 1,500,000; rendering obvious a component having a molecular weight in the range of 1,000,000-1,500,000. MPEP § 2144.05 [R-5] states “In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). The molecular weight ranges of polyethylenes (A) and (C) of Moriguchi overlap the molecular weight ranges recited in the instant claims. Furthermore, as noted in the previous Office Action, the ratios for combining polyethylenes (A), (B), and (C) disclosed by Moriguchi render obvious compositions in which the percentages of (A) and (C) overlap with the values recited in the instant claims.

11. Furthermore, MPEP § 2123 [R-5] states “A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art, including nonpreferred embodiments. *Merck & Co. v. Biocraft Laboratories*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989). See also *Upsher-Smith Labs. v. PamLab, LLC*, 412 F.3d 1319, 1323, 75 USPQ2d 1213, 1215 (Fed. Cir. 2005)(reference disclosing optional inclusion of a particular component teaches compositions that both do and do not contain that component); *Celeritas Technologies*

Ltd. v. Rockwell International Corp., 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998). The examiner therefore takes the position that it is insufficient to merely argue that the claimed molecular weights are not taught by either the preferred ranges or examples disclosed by Moriguchi. The examiner therefore maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to choose the overlapping portions of the molecular weight ranges disclosed by Moriguchi and the molecular weight ranges recited in the instant claims.

12. In response to applicant's argument that Moriguchi is not prior art as the molecular weight ranges disclosed by the reference are based on viscosity measurements rather than gel permeation chromatography as recited in the claims, the examiner notes that the PTO does not have the facilities necessary to prepare the polyethylene composition rendered obvious by Moriguchi and perform an analysis via gel permeation chromatography. The Office therefore does not have the means to determine whether the composition rendered obvious by Moriguchi meets the recited limitations.

13. MPEP § 2112 recites that "[T]he PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his [or her] claimed product. Whether the rejection is based on inherency under 35 U.S.C. 102, on *prima facie* obviousness under 35 U.S.C. 103, jointly or alternatively, the burden of proof is the same..." as that required with respect to product-by-process claims. *In re Fitzgerald*, 619 F.2d 67, 70, 205 USPQ 594, 596 (CCPA 1980). The burden is therefore shifted to the applicant to provide factual evidence that the composition rendered

obvious by Moriguchi does not show the recited fractions when analyzed by gel permeation chromatography as recited in the instant claims.

14. In response to applicant's argument that Moriguchi fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., good processability and water vapor transmission rate) are not recited in the rejected claims 5-16. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner notes that the independent claims 5 and 6 merely recite ethylene homopolymer or interpolymer compositions characterized by percentage fractions having specified molecular weights; neither the independent claims nor the dependent claims discuss processability or WVTR.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Lenihan whose telephone number is (571)270-5452. The examiner can normally be reached on Monday through Thursday from 7:30-5:00 PM, and on alternate Fridays from 7:30-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Irina S. Zemel/
Primary Examiner, Art Unit 1796

Jeffrey Lenihan
Examiner, Art Unit 1796

/JL/